

## EP WELLS DAILY OPERATIONS REPORT

Report 19

10/03/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 H 0908H
Wellbore	UNIVERSITY 19 H 0908H
WBS No/API No	30266564 / 4230133234.00

## Event Summary

Event Type	Completion only	Event Start Date	09/03/2017	Days on Location	19.00
Objective	Install Completion	Original Spud Date	05/08/2017		
Est. Days	31.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

## Well Status

Supervisor	T GREGA	Measured Depth(ft)	
Engineer	Alex Villegas	TVD(ft)	
Other Supervisor	STEELE,MORGAN BRETT	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,792.80 / 2,766.80	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	0/0	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	784,332/4,135,334.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.19	LOT/FIT EMW(ppg)	
Daily Cost	164,028	Lithology	
		Formation/MD Top	

## HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC RWC MTC FAC Last casing pressure test			PSI NII HPI <b>GOAL ZERO DAYS</b> <b>PS BARRIER EVENT</b> <b>PS barrier bowtie review</b>			TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	
Safety Comments:							

## HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection Last BOP function test Last BOP Test Next BOP Test			JSA's/Toolbox Talks Days Since Last Drill	18

## Operations Summary

24 Hour Summary
FRAC STG 8,9 PERF STG 8,9,10
Update Since Report Time
24 Hour Forecast
CONTINUE FRAC OPERATIONS

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## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.87	FRAC	FWL			0		Wait on other pad operations.
1:52	0.30	FRAC	FWL			0		125 Shut in well with 4350psi. Bleed off. 145 Break lubricator. All shots fired. Drop ball. MU night cap. LD tools and lub. Secure crown and wing valves. 152 Handover from WL to frac.
2:10	1.12	FRAC	WLT			0		311 "Stage #8 Plug and Perf RIH with (4) 1' Keane guns: 2.75" OD HSC at 6SPF with 60* phased perforating guns and Downhole Technology Boss Hog composite ball-drop frac plug. Tie into liner top @11016". Pump down as follows: 3bpm @ 4300psi11380 6bpm @ 4600psi11600 9bpm @ 5000psi11730 bpm @ psi bpm @ psi 9bpm @ 6094psi  Set plug @ 17836ft Perforate as follows: 17823' - 17824' 17779' - 17780' 17735' - 17736' 17688' - 17689' Stabilized pressure after perf: 5200psi Pump down volume: 125bbl" 317 POOH
3:17	1.22	FRAC	WLF			0		Shut in well with 4400psi. Bleed off.Break lubricator. All shots fired.MU night cap. LD tools and lub.Secure crown and wing valves.Handover from WL to frac.
4:30	0.45	FRAC	WLF			0		Wait on other pad operations.
4:57	1.67	FRAC	WLF			0		Stage 8 Summary University 19 H 0908H Interval 17691 - 17824 Open Well Pressure 4,781 psi Max Treating Pressure 9,192 psi Max Slurry Rate 60.4 bpm Average Treating Pressure 8,589 psi Average Slurry Rate 52.3 bpm Breakdown Pressure 7,478 psi Breakdown Rate 9.2 bpm Breakdown Volume 210 gal Avg HHP 11,010 hp Final ISIP 5,337 psi Frac Gradient 0.895 psi/ft Pad Volume 966 gal Main Body Volume 184,422 gal Flush Volume 28,056 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 0 lbs 100 M Sand Pumped 0 lbs Proppant in Formation 0 lbs Avg Proppant Concentration 2.85 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,516 bbls Load to Recover w/o Acid 4,504 bbls 15% HCL Spearhead 504 gal Slickwater Fluid Pumped 4,299 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 125 bbls pump down rate 9.0 bpm Max pump down pressure 6,094 psi Fluid Temp 72.0 ?F Total Pump Time 1:40 hr:min Pumps Lost During Job 0 Treatment Start Time 4:57 0:00 0:00

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Treatment End Time 6:37 0:00 1:40 Diverter Slurry bbls  -Pumped sand in a 0.50 PPA -2.50 PPA ramp, 2.50 PPA, 3.00 PPA, 3.5 PPA, 4.0 PPA Steps. -Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Pumped one 500gal shot of acid. - Ran a ball in place plug.
6:37	2.88	FRAC	WLF			0		Wait on other pad operations.
9:30	0.42	FRAC	WLF			0		Shut in well with 4400psi. Bleed off.Break lubricator. All shots fired. MU night cap. LD tools and lub. Secure crown and wing valves.Handover from WL to frac.
9:55	1.07	FRAC	WLT			0		"Stage #9 Plug and Perf RIH with (4) 1' Keane guns: 2.75" OD HSC at 6SPF with 60* phased perforating guns and Downhole Technology Boss Hog composite ball-drop frac plug. Tie into liner top @11016". Pump down as follows: 3bpm @ 4500psi11380 6bpm @ 4700psi11600 9bpm @ 5600psi11730 11.5bpm @ 6000 psi  11.5bpm @ 6150psi  Set plug @ 17671ft Perforate as follows: 17647' - 17648' 17603' - 17604' 17560' - 17561 17516' - 17517' Stabilized pressure after perf: 53005psi Pump down volume: 108bbl" POOH
10:59	1.95	FRAC	WLF			0		Wait @ 200ft on other pad operations
12:56	1.28	FRAC	WLF			0		Shut in well with 4600psi. Bleed off.Break lubricator. All shots fired.MU night cap. LD tools and lub.Secure crown and wing valves.Handover from WL to frac.
14:13	1.57	FRAC	FRT			0		Stage 9 Summary University 19 H 0908H Interval 17516 - 17648 Open Well Pressure 4,994 psi Max Treating Pressure 9,153 psi Max Slurry Rate 61.3 bpm Average Treating Pressure 8,421 psi Average Slurry Rate 54.2 bpm Breakdown Pressure 7,542 psi Breakdown Rate 4.5 bpm Breakdown Volume 84 gal Avg HHP 11,187 hp Final ISIP 5,237 psi Frac Gradient 0.886 psi/ft Pad Volume 2,436 gal Main Body Volume 183,792 gal Flush Volume 27,804 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 0 lbs 100 M Sand Pumped 424,280 lbs Proppant in Formation 424,280 lbs Avg Proppant Concentration 2.87 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,484 bbls Load to Recover w/o Acid 4,472 bbls 15% HCL Spearhead 504 gal Slickwater Fluid Pumped 4,284 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Pump down volume 108 bbls pump down rate 11.5 bpm Max pump down pressure 6,100 psi Fluid Temp 72.0 ?F Total Pump Time 1:34 hr:min Pumps Lost During Job 1 Treatment Start Time 14:13 0:00 0:00 Treatment End Time 15:47 0:00 1:34 Diverter Slurry bbls  -Pumped sand in a 0.50 PPA -3.00 PPA ramp,3.00 PPA, 3.50 PPA, 4.0 PPA Steps. -Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Pumped one 500gal shot of acid. - Ran a ball in place plug. - Lost pump Q417 due to electrical issues.
15:47	3.72	FRAC	FWL			0		WAIT ON OTHER PAD OPERATIONS
19:30	0.88	FRAC	FWL			0		1930 Handover from frac to WL. 1945 Pick up lubricator. Remove night cap. PU tools. 1950 Stab lubricator. Fill lubricator. 1957 PT lubricator to 8000psi 2023 Open well with 4300psi.
20:23	2.70	FRAC	WLT			0		922 "Stage #10 Plug and Perf RIH with (4) 1' Keane guns: 2.75" OD HSC at 6SPF with 60* phased perforating guns and Downhole Technology Boss Hog composite ball-drop frac plug. Tie into liner top @11016". Pump down as follows: 3bpm @ 4300psi11497 6bpm @ 4600psi11600 9bpm @ 5000psi11690 10bpm @ 6300psi13024 bpm @ psi 10.3bpm @ 6538psi  Set plug @ 17495ft Perforate as follows: 17472' - 17473' 17427.5' - 17428.5' 17383.5' - 17384.5' 17340' - 17341' Stabilized pressure after perf: 4780psi Pump down volume: 116bbl" 2135 POOH
23:05	0.12	FRAC	WLT			0		2305 Shut in well with 4250psi. Bleed off. 2310 Break lubricator. All shots fired. Drop ball. MU night cap. LD tools and lub. Secure crown and wing valves. 2312 Handover from WL to frac.
23:12	0.80	FRAC	WLT			0		WAIT ON OTHER PAD OPERATIONS
<b>Total</b>	<b>24.00</b>							

## 06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	WLT			0	WAIT ON OTHER PAD OPERATIONS